EA Form R 1/2001

Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. *Applicant/Contact name and address*: FIRST INTERSTATE BANK
101 EAST FRONT STREET
MISSOULA, MT 59802

2. *Type of action*: APPLICATION FOR BENEFICIAL WATER USE PERMIT 76M-30041556

3. *Water source name*: GROUNDWATER

4. *Location affected by project*: NENWSW SECTION 22, T 13 N, R 19 W, MISSOULA COUNTY

5. *Narrative summary of the proposed project, purpose, action to be taken, and benefits*:
THE APPLICATION FOR WATER USE PERMIT UNDER CONSIDERATION IS A PROPOSAL TO DIVERT GROUNDWATER FROM A WELL FOR THE PURPOSE OF HEATING AND COOLING THE FIRST INTERSTATE BANK BUILDING AT 101 EAST FRONT STREET IN MISSOULA MONTANA. THIS NEW CONSTRUCTION IS REPLACING A BUILDING THAT HAS BEEN DEMOLISHED. THIS APPLICATION IS REQUESTING A TOTAL FLOW RATE OF 820 GPM, UP TO AN ANNUAL VOLUME OF 462.4 ACRE-FEET. THE DIVERTED GROUNDWATER WILL BE INJECTED BACK INTO THE GROUNDWATER AQUIFER THROUGH AN INJECTION WELL AFTER PASSING THROUGH THE BUILDING HEAT EXCHANGE SYSTEM. THE PROPOSED HEATING/COOLING SYSTEM IS COMPLETELY CLOSED TO INSURE NO CONTAMINATION OF WATER INJECTED BACK INTO THE GROUNDWATER AQUIFER. THE HEATING/COOLING SYSTEM IS TO BE USED BETWEEN JANUARY 1 AND DECEMBER 31 EACH YEAR. THE APPLICANT HAS CONDUCTED A 72-HOUR AQUIFER TEST AND CORRECTLY REPORTED THE RESULTS.

THE DNRC SHALL ISSUE A WATER USE PERMIT IF AN APPLICANT PROVES THE CRITERIA IN 85-2-311, MCA ARE MET.

6. Agencies consulted during preparation of the Environmental Assessment: (include agencies with overlapping jurisdiction)

STATE HISTORIC PRESERVATION OFFICE
MONTANA NATURAL HERITAGE PROGRAM

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.*

Determination: NO SIGNIFICANT IMPACTS.

SEE GROUNDWATER SECTION BELOW.

Water quality *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

Determination: NO SIGNIFICANT IMPACTS.

SEE GROUNDWATER SECTION BELOW.

Groundwater *- Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

Determination: NO SIGNIFICANT IMPACTS.

THE PROPOSED PROJECT IS EXPECTED TO HAVE MINIMAL IMPACTS TO GROUNDWATER SUPPLY AND QUALITY. THE PROPOSED SYSTEM USES DIVERTED GROUNDWATER THAT INTERACTS WITH A HEAT EXCHANGER FOR HEATING AND COOLING PURPOSES. AFTER USE THE DIVERTED GROUNDWATER IS CONVEYED THROUGH A CLOSED LOOP TO AN INJECTION WELL.

THE SOURCE OF GROUNDWATER IS THE MISSOULA AQUIFER. NUMEROUS STUDIES HAVE SHOWN THAT THE MISSOULA AQUIFER IS CAPABLE OF SUSTAINED DIVERSIONS WITH LITTLE TO NO IMPACT ON THE CONTINUED SUPPLY OF GROUNDWATER. THE APPLICANT HAS PRESENTED AN AQUIFER REPORT THAT SHOWS 7.7 FEET OF DRAWDOWN IN THE PRODUCTION WELL AT THE END OF THE PUMP TEST AT THE TESTED FLOW RATE. THE APPLICANT'S

REPORT PROJECTS IMPACTS TO ALL GROUNDWATER RIGHTS WITHIN THE IDENTIFIED ZONE OF INFLUENCE AND REPORTS THAT THE MAXIMUM IMPACT WOULD BE APPROXIMATELY 0.9 FEET AT THE END OF THE ANNUAL PERIOD OF DIVERSION. THE APPLICANT HAS PRESENTED INFORMATION THAT INDICATES NO IMPACTS TO ANY SURFACE WATER SOURCE.

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

Determination: NO SIGNIFICANT IMPACTS.

A LICENSED WELL DRILLER CONSTRUCTED THE PRODUCTION AND INJECTION WELLS. THE APPLICANT PROVIDED COPIES OF THE WELL DRILLERS' LOGS WITH THE APPLICATION.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species - *Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

Determination: NO SIGNIFICANT IMPACTS.

RESEARCH DONE BY THE MONTANA NATURAL HERITAGE PROGRAM REVEALS SEVERAL SPECIES OF CONCERN IN THE AREA OF THE PROPOSED PROJECT. NONE OF THE IDENTIFIED SPECIES ARE EXPECTED TO BE IMPACTED BY THE PROPOSED PROJECT.

BULL TROUT AND WEST SLOPE CUTTHROAT TROUT ARE IDENTIFIED IN THE CLARK FORK RIVER, WHICH PASSES NEARBY THE FIRST INTERSTATE BANK BUILDING.

THE MISSOULA PHLOX AND THE OBSCURE EVENING PRIMROSE ARE PLANT SPECIES THAT ARE LISTED, BUT WILL NOT BE IMPACTED BY THE PROPOSED PROJECT.

THE WESTERN SKINK, THE FLAMMULATED OWL, THE HARLEQUIN DUCK, THE SWAINSON'S HAWK, THE FRINGED MYOTIS, THE GRAY WOLF, THE CANADA LYNX, THE WOLVERINE, THE FISHER, THE GRASSHOPPER SPARROW AND THE A CAVE OBLIGATE AMPHIPOD ARE ANIMAL SPECIES IDENTIFIED BY THE MONTANA NATURAL HERITAGE PROGRAM AS OCCURRING IN THE AREA SURROUNDING AND IN THE VICINITY OF THE PROPOSED PROJECT. NO IMPACTS ARE EXPECTED IF THE PROPOSED PROJECT IS APPROVED.

Wetlands *- Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Determination: NO IMPACTS.

THERE ARE NO WETLANDS ASSOCIATED WITH THE PROPOSED PROJECT.

Ponds *- For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: NO IMPACTS.

THERE ARE NO PONDS ASSOCIATED WITH THE PROPOSED PROJECT.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

Determination: NO IMPACTS.

NO WATER WILL BE APPLIED TO SOILS IN THE AREA. THE DIVERTED WATER WILL PASS THROUGH A CLOSED HEATING/COOLING SYSTEM AND INJECTED BACK INTO THE GROUND WATER AQUIFER.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

Determination: NO IMPACTS.

SOME SOIL DISTURBANCE HAS OCCURRED WITH THE CONSTRUCTION OF THE PRODUCTION AND INJECTION WELLS. THE NEW BANK BUILDING IS REPLACING A BUILDING THAT HAS BEEN DEMOLISHED. THE NEW BUILDING IS BEING CONSTRUCTED ON THE SAME LOCATION AS THE OLD BUILDING. DUE TO THE LOCATION OF THE TWO WELLS ON APPLICANT'S PROPERTY SOILS DISTURBANCE IS MINIMIZED.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Determination: NO IMPACTS.

THE CONSTRUCTION OF WELLS MAY HAVE RESULTED IN THE SPREAD OF SOME DUST. THIS DUST ISSUE WOULD HAVE BEEN SHORT IN DURATION AND NOT A FACTOR AFTER WELLS ARE COMPLETED.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project.*

Determination: NO SIGNIFICANT IMPACTS.

ACCORDING TO THE RECOMMENDATION OF THE STATE HISTORICAL PRESERVATION OFFICE, NO INVENTORY OF CULTURAL RESOURCES IS NEEDED AT THIS TIME.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: NO IMPACTS.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: NO IMPACTS.

THE PROPOSED PROJECT IS CONSISTENT WITH LOCALLY ADOPTED PLANS AND GOALS. THE PROPOSED SYSTEM IS PROJECTED TO REPLACE AN EXISTING HEATING AND COOLING SYSTEM.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

Determination: NO IMPACTS.

THE CONSTRUCTION OF WELLS FOR HEATING AND COOLING THE FIRST INTERSTATE BANK BUILDING WILL NOT LIMIT ACCESS TO WILDERNESS OF RECREATIONAL ACTIVITIES.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

Determination: NO IMPACTS.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
*Yes___ No_**X**_ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.*

Determination: NO IMPACTS.

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) Cultural uniqueness and diversity?	NONE
(*b) Local and state tax base and tax revenues?*	NONE
(c) Existing land uses?	NONE
(*d) Quantity and distribution of employment?*	NONE
(e) Distribution and density of population and housing?	NONE
(f) Demands for government services?	NONE
(g) Industrial and commercial activity?	NONE
(h) Utilities?	NONE.
(i) Transportation?	NONE
(j) Safety?	NONE
(k) Other appropriate social and economic circumstances?	NONE

2. ***Secondary and cumulative impacts on the physical environment and human population:***

Secondary Impacts NONE IDENTIFIED

Cumulative Impacts NONE IDENTIFIED.

3. ***Describe any mitigation/stipulation measures:*** THERE ARE NO MITIGATION/STIPULATION MEASURES IDENTIFIED FOR THE PROPOSED ACTION.

4. ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:***

THE NO ACTION ALTERNATIVE IS THE ONLY ALTERNATIVE TO THE PROPOSED ACTION. UNDER THE NO ACTION ALTERNATIVE, THE APPLICANT WOULD BE UNABLE TO OBTAIN A WATER RIGHT FOR THE PROPOSED GEOTHERMAL HEATING AND COOLING SYSTEM.

PART III. Conclusion

1. Preferred Alternative

2. Comments and Responses

3. Finding:
Based on the significance criteria evaluated in this EA, is an EIS required?

*Yes___ No_**X**__*

If an EIS is not required, explain <u>why</u> the EA is the appropriate level of analysis for this proposed action: AN EA IS THE APPROPRIATE LEVEL OF ANALYSIS FOR THIS PROPOSED ACTION BECAUSE NO SIGNIFICANT IMPACTS HAVE BEEN IDENTIFIED AS A RESULT OF THE PROPOSED ACTION.

Name of person(s) responsible for preparation of EA:

Name: PATRICK RYAN
Title: WATER RESOURCE SPECIALIST
Date: MAY 30, 2008